



Water System Security and Resilience in Homeland Security Research

Healthy, secure communities require clean drinking water and sanitary waste treatment. EPA provides water utilities with tools and strategies needed to improve drinking water and wastewater system resiliency to disasters, and to quickly recover from contamination involving chemical, biological, radiological, (CBR) agents. EPA also helps water utilities to enhance the cyber-security of their water systems.

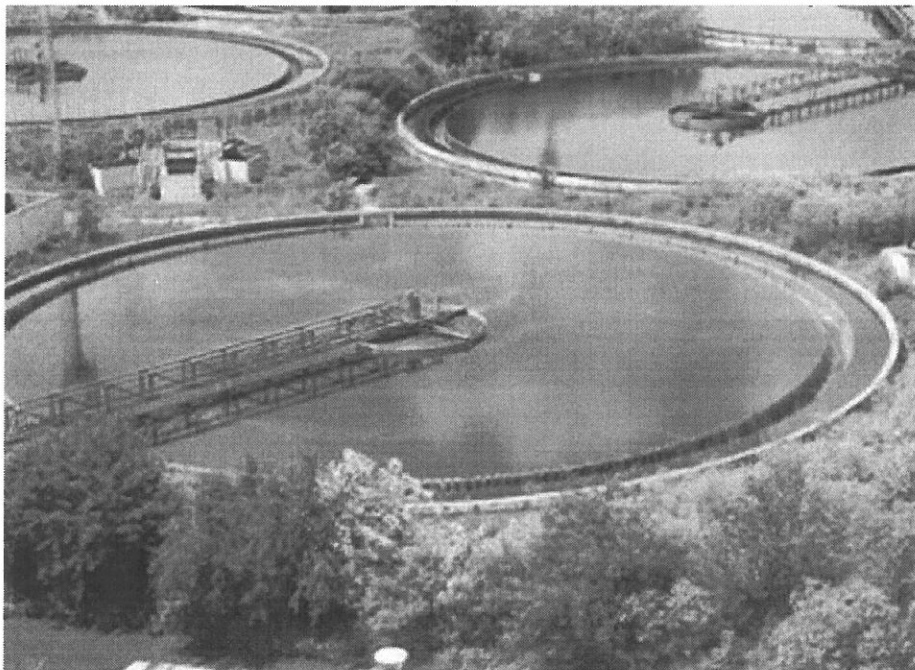
Infrastructure Protection

Contaminant Detection

Containment and Mitigation

Treatment and Decontamination

Drinking and Wastewater Infrastructure Protection



Wastewater Treatment Plant

EPA partners closely with other state and federal agencies and organizations and provides water utilities with tools and methods to identify, prioritize and respond to threats to the nation's drinking water and wastewater systems.

The Bioterrorism Act of 2002 requires that drinking water utilities serving more than 3,300 people conduct vulnerability assessments and develop emergency response plans. EPA and its partners help utilities meet these requirements by developing tools and methodologies that:

- identify and prioritize threats to drinking water and wastewater infrastructure
- evaluate vulnerabilities
- create standard frameworks for risk management
- plan for countermeasures to reduce the risk of intentional contamination

In addition to contamination incidents, attacks on water systems involving explosives are possible. The Blast Vulnerability Assessment (BVA) tool, desktop computer tool developed by EPA, can be used with minimal training. A variety of options allow for different scenarios, providing estimates of damage that could occur from an attack using explosives. This tool is available from the Water Information Sharing and Analysis Center (WaterISAC): a secure website with a controlled subscription list.

The Consequence Estimation Tool, a component of the Threat Ensemble Vulnerability Assessment (TEVA) Sensor Placement Optimization (TEVA-SPOT), allow water utilities to estimate health consequences, risks, and vulnerabilities from contamination. Utilities can harden their system against contaminant attacks, better handle security incidents, while improving day-to-day operations through the use of this tool.

EPA has collaborated with the American Water Works Association (AWWA) to develop contingency plans in the event of a large-scale disaster. *Planning for an Emergency Drinking Water Supply* has recommendations on planning for alternative drinking water sources and water and wastewater treatment.

Related Resources

- Public Health Security and Bioterrorism Preparedness and Response Act (Bioterrorism Act of 2002)

Related Products

- Blast Vulnerability Assessment Tool – Water Information Sharing and Analysis Center (WaterISAC) Portal [Exit](#)
- Threat Ensemble Vulnerability Assessment (TEVA) Sensor Placement Optimization (TEVA-SPOT)
- Planning for an Emergency Drinking Water Supply
- Vulnerability assessment reports and software